

City of Springfield MS4 Program Audit
NPDES Permit Number TNS077640
August 4, 2010

The stormwater management program was evaluated for compliance with the minimum control measures required by the NPDES permit. Included in this report are relevant sections of the NPDES permit, which are summarized in italics and followed by the status of compliance with the permit requirement. Recommendations are given to correct violations discovered during the audit.

Minimum Control Measure 1 – Public Education and Outreach

NPDES Permit Section 4.2.1.1.1

For any types of activities you know to be storm water pollutant hot spots in your area, you must prepare a clear set of requirements with respect to storm water management at these establishments and ensure that the establishments have been made aware of those requirements.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had not identified potential hot spots as required by the permit. In the City's response letter dated July 14, 2009, the City committed to develop a list of hot spots, perform inspections, and identify a clear set of requirements for stormwater management at each specific hot spot by December 31, 2009. The City of Springfield's MS4 program has not identified potential hot spots.

This permit requirement still has not been met.

Recommended action: Identify Hot Spots as identified in the NPDES permit. Document a plan of action specifying the requirements for hot spots and how establishments will be made aware of those requirements.

Minimum Control Measure 3 – Illicit Discharge Detection and Elimination

NPDES Permit Section 4.2.3.1.1

Develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in 40 CFR §122.26(b)(2)) into your small MS4.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had not developed a program to address or eliminate illicit discharges. In the City's response letter dated July 14, 2009, the City committed that a schedule for dry- weather screenings of permitted outfalls and a procedure for addressing and eliminating illicit discharges discovered through dry weather screening, identification of illicit discharges by the public or observed by City staff would be developed by December 31, 2009. The City of Springfield has not developed a program to address or eliminate illicit discharges.

This permit requirement still has not been met.

Recommended action: Develop and implement an Illicit Discharge Detection and Elimination program.

NPDES Permit Section 4.2.3.1.2

Develop, if not already completed, a storm sewer system map, showing the location of all outfalls (i.e., points where the city or county-operated storm sewer system discharges into wet weather conveyances owned or operated by another MS4, or into waters with use classifications designated by the state.) and the names and location of all use-designated waters of the state that receive discharges from those outfall.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had not developed a complete storm sewer system map. In the City's response letter dated July 14, 2009, the City committed that the missing data fields will be added to the outfall map and the map will be updated to include all permit requirements by December 31, 2009. The City of Springfield has developed a storm sewer system map. At the time of this audit it was unclear if the map was complete. Specifically, it was unclear what "layers" of the map were available, if all outfalls were identified, and the names and location of all use-designated waters of the state that receive discharges from those outfalls.

Recommended action: Develop a complete storm sewer system map that shows the location of all outfalls and the identification of the receiving streams. The map should be in a format that is easily accessible by the City of Springfield's Stormwater employees.

NPDES Permit Section 4.2.3.1.4

Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to your system.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had not developed a plan to detect and address non-stormwater discharges. Furthermore the City's annual reports indicate that the milestones for dry weather screening had been met. The City of Springfield in their July 14, 2009, letter stated that a standard operating procedure (SOP) for addressing, detecting, and eliminating non-stormwater discharges to the MS4 would be completed by December 31, 2009. Documentation showing that the City had developed procedures and/or was performing dry weather screenings could not be provided.

This permit requirement still has not been met.

Recommended action: Develop a plan and a set of procedures to implement an illicit discharge detection and elimination program. This plan should clearly outline how the City proposes to detect, address and document non-stormwater discharges to the MS4.

NPDES Permit Section 4.2.3.1.5

Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had made an active effort to present information to public employees, businesses, or the general public about illicit discharges or the water quality impact of improper waste disposal. In the City's response letter the City committed to obtaining the necessary resources to inform and educate target audiences about water quality impacts related to illegal discharges and improper disposal of wastes. And to develop a procedure to distribute this material by December 31, 2009. As of August 4, 2010, the City of Springfield's MS4 program had not developed resources related to

target audiences to assist the City in educating the public about water quality impacts related to illegal discharges and improper disposal of wastes. The City of Springfield's MS4 program has not established a procedure for the distribution of the resources.

This permit requirement still has not been met.

Recommended action: Develop and implement a program to educate the public targeted audiences about the water quality impacts of illegal discharges and improper disposal of waste.

NPDES Permit Section 4.2.3.1.6

Address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to your small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the state).

In the division's May 14, 2009, audit NOV letter and report it noted that the City's ordinance was not consistent with the NPDES permit requirements with regard to allowable discharges from individual residential car washing, control flushing, discharge within the constraints of a NPDES permit, and discharges with discretionary approval. The City's response letter committed the City to modify the ordinance to specifically include allowable discharges as defined in Section 1.4.2.3 of the permit by December 31, 2009. The ordinance has not been revised to be consistent with the NPDES permit requirements

This permit requirement still has not been met.

Recommended action: The ordinance should be modified to only incorporate the allowable discharges identified in the NPDES permit.

NPDES Permit Section 4.2.3.2

You must be able, by ordinance or other regulatory mechanism, to prohibit contamination of storm water runoff from hot spots.

In the division's May 14, 2009, audit NOV letter and report it noted that the City's ordinance failed to fully meet this NPDES permit requirement. The City's July 14, 2009, response letter committed the City to modify their ordinance to specifically include prohibited contamination of stormwater runoff from hot spots by December 31, 2009. The ordinance has not been revised to be consistent with the NPDES permit requirements.

This permit requirement still has not been met.

Recommended action: The ordinance should be modified and adopted to incorporate the NPDES permit requirements.

Minimum Control Measure 4- Construction Site Stormwater Runoff Control

NPDES Permit Section 4.2.4.1

Permit requirement. You must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

In the division's May 14, 2009, audit NOV letter and report it noted that the City's ordinance allows for exemptions that are not consistent with the NPDES permit. The City's July 14, 2009, response letter committed the City to modify their ordinance to be consistent with the NPDES permit by December 31, 2009. The ordinance has not been revised to be consistent with the NPDES permit requirements.

This permit requirement still has not been met.

Recommended action: The ordinance should be modified and adopted to be consistent with the NPDES Permit requirements.

NPDES Permit Section 4.2.4.1.3

Requirements corresponding to the Tennessee Construction General Permit, effective July 1, 2000:

- (a) Necessity of an erosion prevention and sediment control/pollution prevention plan*
- (b) Erosion and sediment control measures shall be designed to control the rainfall and runoff from a 2 year, 24 hour storm, as a minimum.*
- (c) For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from a 2 year, 24 hour storm and runoff coefficient from each disturbed acre drained, or equivalent control measures, shall be provided until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site.*

In the division's May 14, 2009, audit NOV letter and report it noted that the City did not have requirements for erosion and sediment controls to meet the 2 year, 24 hour design storm. Also, a sediment basin was not required to serve a drainage area of 10 or more acres. The City's July 14, 2009, response letter committed the City to modify their ordinance to be consistent with the Construction General Permit by December 31, 2009. The ordinance has not been revised to be consistent with the NPDES Construction General Permit requirements.

This permit requirement still has not been met.

Recommended action: Adopt requirements corresponding to the Tennessee Construction General Permit.

NPDES Permit Section 4.2.4.1.4

Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had no requirement for construction site operators to control these wastes. The City's July 14, 2009, response letter committed the City to modify their ordinance to be consistent with the NPDES permit by December 31, 2009. The ordinance has not been revised to be consistent with the NPDES permit requirements.

This permit requirement still has not been met.

Recommended action: The ordinance should be modified and adopted to be consistent with the NPDES Permit requirements

NPDES Permit Section 4.2.4.1.9

Your program must provide for the following:

- (a) Recognition of priority construction activity, including at a minimum those construction activities discharging directly into, or immediately upstream of, waters the state recognizes as impaired (for siltation) or high quality;*
- (b) Pre-construction meetings with construction-site operators, for priority construction activities; and*
- (c) Inspections by the MS4, of priority construction sites at least once per month.*

Currently, the inspection efforts are divided equally among all construction sites without consideration for the status of receiving streams. Pre-construction meetings are held to consider the adequacy of sediment control measures. The Public Works Department makes an effort to conduct inspections of all construction sites on a daily basis. The City's July 14, 2009, response letter committed the City to have standard operating procedures (SOP) developed to specifically recognize and inspect construction sites with outfalls discharging into impaired or high quality waters by December 31, 2009. The SOP has not been developed.

This permit requirement still has not been met.

Recommended Action: Establish and implement procedures for recognizing and inspecting priority construction sites. Sites discharging into impaired or high quality waters should receive more attention than sites less likely to affect water quality.

Minimum Control Measure 5- Post Construction Stormwater Management

NPDES Permit Section 4.2.5.1.2

Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had not met this permit requirement. In the City's July 14, 2009, response letter it committed the City to have a post-construction strategy developed that will address proposed developments and significant redevelopments within the City by December 31, 2009. An SOP for reviewing post-development BMPs as part of the plan review process will be developed by December 31, 2009. A post construction strategy or SOP for reviewing post-development has not been established.

This permit requirement still has not been met.

Recommended Action: Develop and implement a post construction/BMP strategy which may include a guidance manual for your community. Establish procedures for plans review that address post-construction stormwater runoff.

NPDES Permit Section 4.2.5.1.3

You must develop and implement a set of requirements to establish, protect and maintain water quality buffers in areas of new development and redevelopment.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had not developed procedures to guide and implement the City's water quality buffer requirements. In the City's July 14, 2009, response letter it committed the City to to modify their ordinance to include management and implementation of the buffer by December 31, 2009. The ordinance has not been revised to include this requirement.

This permit requirement has not been completely met.

Recommended Action: Develop a set of procedures to implement post construction buffer requirements.

Minimum Control Measure 6- Pollution Prevention/Good Housekeeping

NPDES Permit Section 4.2.6.1.1

Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and

NPDES Permit Section 4.2.6.1.2

Using training materials that are available from EPA, the division, or other organizations, your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

NPDES Permit Section 4.2.6.1.3

You must consider the following in developing your program: maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural storm water controls to reduce floatables and other pollutants discharged from your separate storm sewers; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by you, and waste transfer stations; procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices. Operation and maintenance must be an integral component of all storm water management programs. This measure is intended to improve the efficiency of these programs and require new programs where necessary. Properly developed and implemented operation and maintenance programs reduce the risk of water quality problems.

In the division's May 14, 2009, audit NOV letter and report it noted that the City had not developed an operation and maintenance program with a training component that addresses stormwater pollution from municipal operations. In the City's July 14, 2009, response letter it committed the City to develop an SOP for operation and maintenance for City owned facilities incorporating permit requirements, with a training component by December 31, 2009. The City of Springfield has trained the employees from the Public Works Department, however, the City of Springfield has not developed an operation and maintenance program with a training component that addresses stormwater pollution from other municipal operations. Therefore, the requirements of Sections 4.2.6.1.1, 4.2.6.1.2, and 4.2.6.1.3 (summarized above) are still not being met.

Recommended Action: Develop and implement an operation and maintenance program with a training component to reduce the risk of water quality problems from all municipal facilities and operations.

Conclusion:

The new small Municipal Separate Storm Sewer System (MS4) permit was issued on August 31, 2010, and will become effective on October 1, 2010. Please note that the Six Minimum Control Measures and requirements mentioned above are still required in the new permit.

Again since the Division's inspection found significant non-compliance in your stormwater management program, it is recommended that the City of Springfield allocate the necessary resources to allow for the proper development and implementation of this program so that permit requirements can be met. Additionally, the Division recommends the development of a stormwater management plan. This plan should contain standard operating procedures (SOPs) for all components of the program. A plan with relevant SOPs should provide guidance and direction for the implementation of an effective program. A well-developed and implemented

plan will enable the City to show that the program is moving toward improving water quality and meeting the permit requirements.